# 15.0 Soil Excavation, Handling and Disposal Plan (Section 02300)

Revision Number: 01

This Soil Excavation, Handling and Disposal Plan has been prepared per Section 02300 and includes information on how NRCES will excavate, handle and dispose of contaminated soil during implementation of the project.

## 15.1 Excavation Equipment and Procedures

Excavation will be conducted in a manner to limit noise, dust and vibratory impacts. Excavation activities will be monitored in accordance with the Air Emissions/Dust Control Plan, Erosion and Sediment Control Plan and the Health and Safety Plan.

Equipment to be used for demolition included the following:

- Caterpillar 345 Excavator with thumb
- Case 130 Excavator with thumb
- Caterpillar 315 with breaker
- Caterpillar D5 bulldozer
- 3 cubic yard rubber tire bucket loader
- 2,000 gallon water truck

## 15.2 Survey Control

Survey control will be in accordance with Section 01720. NRCES will conduct progress surveys to document that the lines and grades of the Drawings have been achieved within specified tolerances. For payment purposes, excavation volumes will be based on a comparison between the pre-construction and progress surveys.

## 15.3 Sequencing and Handling

**Non-TSCA Soils**

Non-TSCA soils will be excavated and handled in a manner that prevents contamination by TSCA soils. Equipment and personnel will avoid TSCA designated areas while working within the non-TSCA zones. Excavation of non-TSCA soils will follow an east to west progression and a 10 ft buffer will be left between the TSCA and non-TSCA areas. Poly sheeting will be placed under the swing radius of the excavator bucket to catch any soils or droplets that might fall from the excavator bucket. After excavation of the TSCA soils, the non-TSCA buffer zone will be evaluated and excavated as appropriate. Non-TSCA soils will be disposed of in accordance with the Environmental Protection/Waste Disposal Plan for this project (see section 3 of this document).

**A separate plan for handling soils in the fuel tank area will be submitted along with the Section 02200 Submittal (Excavation Support Systems) and the freeze shoring plan for this area.**

**TSCA Soils**

Excavation of TSCA soils will begin on the SW side of the project beginning with the northern most area of TSCA regulated soils. The excavation of the TSCA regulated soils will continue to the south removing the TSCA regulated soils on both the City of Seattle and Boeing properties simultaneously. The excavation will then turn to an easterly direction following the TSCA regulated soils as shown on the contract drawings. By following these soils in the before mentioned sequence it allows the equipment excavating and handling the TSCA soils to be managed on top of TSCA soils and on an asphalt road (semi- impervious surface) allowing a quick and easy clean up if anything is spilled during the excavation activities.

Soils passing the paint filter test will be excavated with a medium sized excavator and the bucket of contaminated soils will be placed into a poly lined dump truck that will cover the load prior to departing for the disposal facility. Poly sheeting will be placed under the swing radius of the excavator bucket to catch any soils or droplets that might fall from the excavator bucket.

Soils not passing the paint filter test will be excavated with a medium sized excavator and then placed into a decant cell for dewatering. The excavator will pile up the contaminated soils at the side of the excavation in an attempt to partially dewater the soils before removing them from the excavation. The excavator will lift up a bucket of contaminated soils and hold it over the excavation allowing it to further dewater and then pass the bucket of excavated soils into the bucket of a rubber tired bucket loader. Poly sheeting will be placed under the swing radius of the excavator bucket to catch any soils or droplets that might fall from the excavator bucket. The bucket loader will then back over the asphalt road until it reaches the decant cell at which time it will pull forward to the decant cell and slowly dump the contents of the bucket into the decant cell to avoid spilling or splashing the contents of the bucket. At the end of the day any contaminated soils remaining in the excavation will be stacked up against the side of the excavation to allow the soils to dewater over night.

TSCA soils will be disposed of in accordance with the Environmental Protection/Waste Disposal Plan for this project (see section 3 of this document) or placed/loaded in to specified areas to managed in accordance with the Contract documents or as directed by the Owners.

## 15.4 Temporary Decant Facilities

Temporary facilities will be constructed to decant saturated soils and soils not meeting paint filter test. A sketch of the proposed facility and location for the TSCA decant cell is included as Attachment 4. The decant cell floor is constructed first with a layer of 6 ounce non-woven geotextile fabric to protect the 30 mil poly layer from possible sharp objects underneath the decant cell location. The second layer consists of a contiguous 30 mil poly sheeting to prevent any leaking from the Decant Cell. The third layer consists of a contiguous 2-Sided Geocomposite 250 mil Geonet. This layer allows water to pass through the gaps in the steel sheets and collect in the 2-Sided Geocomposite 250 mil Geonet and flow down the 2% minimum slope to the dewatering point in the

decant cell.

The TSCA decant cell liners will be managed as TSCA waste and disposed of in accordance with the Environmental Protection/Waste Disposal Plan. TSCA decant cell materials that will be decontaminated and reused include the steel plates and ecology blocks. Decontamination of these materials shall in accordance with 40 CFR 761.79 and the decontamination cleanup levels indicated in Section 15.5 of this plan.

If necessary, a separate decant facility will be constructed for dewatering non-TSCA soils. This facility will be of the same design and construction as the TSCA decant cell only located in a non-TSCA area. Under no circumstances will non-TSCA soils be decanted in the TSCA decant cell nor will TSCA soils be decanted in the non-TSCA decant cell (if one is required).

## 15.5 Equipment Decontamination

The TSCA decant cell will also serve as a decontamination cell for equipment. Equipment will be decontaminated by a combination of dry and wet methods. Dry methods include wiping with industrial rags or towels damped with an appropriate solvent (i.e. diesel or hexane). Spent wipes or rags will be managed as TSCA waste in accordance with the Environmental Protection/Waste Disposal Plan. Wet methods may include pressure washing and/or fire hose spray. Decontamination water will be captured in the decant cell and conveyed to the treatment system with other process and/or dewatering waters.

Any equipment that comes into contact with soil designated as TSCA remediation waste must be decontaminated and/or wipe sampled in accordance with the decontamination procedures specified under 40CFR §761.79, or alternatively discarded as TSCA remediation waste. Equipment decontamination cleanup levels shall be in accordance with Table 2 below.

| Media | Cleanup Level | Confirmation Method | Regulatory Citation |
|---|---|---|---|
| Non-porous surfaces (steel plates, equipment buckets, etc.) | ≤10 micrograms PCBs per 100 $cm^2$ | standard wipe test | 40CFR §761.79 (b)(3)<br>40CFR §761.123<br>40CFR §761 Subpart P |
| Concrete (ecology blocks, etc.) | ≤10 micrograms PCBs per 100 $cm^2$ | standard wipe test | 40CFR §761.79 (b)(4)<br>40CFR §761.123<br>40CFR §761 Subpart O |

## 15.6 Documentation

Upon completion of the work, NRCES will submit an as-built report documenting the soil cleanup activities, including daily logs and summary forms, as-built drawings and surveyed locations for contaminated soil excavations, and certified weight receipts documenting the weight of materials transported to and disposed at the designated offsite disposal facilities.